

进行了数值模拟。分析得到不同颗粒浓度时, $p_{\max}$ 数值随着粉尘浓度的增加呈现线性关系。确定了 RDX 粉尘爆轰浓度下限为 $0.076 \text{ kg} \cdot \text{m}^{-3}$ 。

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Detonation Structure of RDX Dust in Suspension

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Abstract: RDX dust detonation in suspension behind shock waves was analyzed with two-phase flow model. In the two-phase flow model, steady-state detonation regimes were studied on the basis of the mathematical model of detonation of RDX particles taking into account differences in velocities and temperatures of the mixture components. In this paper, pressure of detonation and development of temperature were numerically simulated when concentration of particle changed. Distribution of parameter was obtained and detonation of RDX dust-air in suspension didn't arise if the concentration of particles was less than $0.076 \text{ kg} \cdot \text{m}^{-3}$.

Key words: explosion mechanics; RDX dust; detonation; two-phase flow



火工与烟火技术未来发展研讨暨《火工品》期刊百期庆祝会在广西桂林召开

由中国兵工学会火工烟火专业委员会、《火工品》编辑委员会主持召开的火工与烟火技术未来发展研讨暨《火工品》期刊百期庆祝会于2004年8月9日至8月11日在广西桂林召开。来自北京理工大学、南京理工大学、中北大学(原华北工学院)、中国兵器工业第213所、204所等17个单位的领导、专家、教授及入选论文作者50余人参加了此次盛会。本次盛会由中国兵工学会火工烟火专业委员会主任委员、《火工品》期刊主编、中国兵器工业第213所所长周胜利主持。会议期间, 召开了“中国兵工学会火工烟火专业六届委员会会议”及《火工品》期刊第四届编委会换届工作会议, 开展了火工与烟火技术未来发展研讨与学术交流及《火工品》期刊百期庆祝活动。学术交流以大会主报告和分场报告的形式展开, 与会专家、教授及入选论文作者分别从火工烟火药剂研究、测试与工艺、安全性与可靠性等多个方面进行了交流。特别是由北京理工大学机电工程学院常务副院长焦清介教授所作的《火工烟火基础研究》将本次学术交流会推向了高潮, 该报告对火工烟火技术的概念进行了创新, 为今后火工品发展提供了借鉴。

(中国工程物理研究院化工材料研究所 周美林供稿)